3/23/2007
Ross Shipe
10/535,253

```
=> file hcaplus
FILE 'HCAPLUS' ENTERED AT 17:50:57 ON 21 MAR 2007
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2007 AMERICAN CHEMICAL SOCIETY (ACS)
```



```
FILE COVERS 1907 - 21 Mar 2007  VOL 146 ISS 13
FILE LAST UPDATED: 20 Mar 2007  (20070320/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

 This file contains CAS Registry Numbers for easy and accurate
 substance identification.

=> d que nos l19
L1             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  GABAPENTIN/CN
L2             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  GABAPENTIN HYDROCHLORID
                 E/CN
L3             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  SODIUM HYDROXIDE/CN
L4             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  POTASSIUM HYDROXIDE/CN

L5             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  LITHIUM HYDROXIDE/CN
L6             3 SEA FILE=REGISTRY ABB=ON  PLU=ON  L3 OR L4 OR L5
L14         1890 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L1 OR GABAPENTIN OR
                 NEURONTIN
L15           70 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L2 OR GABAPENTIN (W)
                 (HCL OR HYDROCHLORIDE OR (HYDROGEN OR H) (W) (CL OR
                 CHLORIDE))
L16              QUE  ABB=ON  PLU=ON  L6 OR (NA OR K OR LI OR LITHIUM OR S
                 ODIUM OR POTASSIUM) (W) (OH OR HYDROXIDE) OR NAOH OR KOH
                 OR LIOH OR ALKALI METAL BASE
L18           16 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L14 AND L15 AND L16
L19           10 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L18 AND (1840-2002)/PRY,
                 PY,AY


=> d l19 1-10 ibib abs hitrn

L19  ANSWER 1 OF 10  HCAPLUS  COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER:         2004:832438  HCAPLUS  Full-text
DOCUMENT NUMBER:          141:297645
TITLE:                    A process for the isolation of pure
                          1-(aminomethyl)cyclohexaneacetic acid from an
                          aqueous solution of its acid addition salt by
                          neutralization with base
INVENTOR(S):              Gurunath, Gaonkar Subhash; Rajamannar, Thennati;
                          Shrivastava, Ratnesh
PATENT ASSIGNEE(S):       Sun Pharmaceutical Industries Ltd., India
SOURCE:                   Indian, 10 pp.
                          CODEN: INXXAP
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   1
```

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
IN 186285	A1	20010728	IN 2000-MU76	200001 24 <--

PRIORITY APPLN. INFO.: IN 2000-MU76 200001 24 <--

AB A process is described for the isolation of pure 1-(aminomethyl)cyclohexaneacetic acid (i.e., **gabapentin**) from an aqueous solution containing acid addition salt of 1-(aminomethyl)cyclohexaneacetic acid [e.g., 1- (aminomethyl)cyclohexaneacetic acid hydrochloride] by treatment with a base (e.g., **sodium hydroxide**) to the isoelec. point. The process yields pure 1-(aminomethyl)cyclohexaneacetic acid directly from the aqueous solution containing its acid addition salt, which salt is generated during the synthesis of 1- (aminomethyl)cyclohexaneacetic acid by the acid hydrolysis of its corresponding lactam.

IT **1310-58-3, Potassium hydroxide,**
reactions **1310-65-2, Lithium hydroxide**
1310-73-2, Sodium hydroxide, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(base; process for the isolation of pure 1-(aminomethyl)cyclohexaneacetic acid from an aqueous solution of its acid addition salt by neutralization with base)

IT **60142-96-3P, Gabapentin**
RL: IMF (Industrial manufacture); PREP (Preparation)
(process for the isolation of pure 1-(aminomethyl)cyclohexaneacetic acid from an aqueous solution of its acid addition salt by neutralization with base)

IT **60142-95-2P, Gabapentin hydrochloride**
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(process for the isolation of pure 1-(aminomethyl)cyclohexaneacetic acid from an aqueous solution of its acid addition salt by neutralization with base)

L19 ANSWER 2 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2004:531340 HCAPLUS Full-text
DOCUMENT NUMBER: 141:89004
TITLE: Use of alpha-2-delta ligands to treat lower urinary tract symptoms associated with overactive bladder or benign prostatic hyperplasia, and the preparation of 4-substituted pyrrolidine-2-carboxylic acid derivatives and other compounds as ligands for such use
INVENTOR(S): Taylor, Charles Price, Jr.; Thorpe, Andrew John; Westbrook, Simon Lempriere; Wustrow, David Juergen
PATENT ASSIGNEE(S): Warner-Lambert Company Llc, USA
SOURCE: PCT Int. Appl., 59 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 9
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004054560	A1	20040701	WO 2003-IB5729	200312 03

<--

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

CA 2509605	A1	20040701	CA 2003-2509605	200312 03

<--

AU 2003303041	A1	20040709	AU 2003-303041	200312 03

<--

EP 1572173	A1	20050914	EP 2003-813233	200312 03

<--

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK

BR 2003016572	A	20051004	BR 2003-16572	200312 03

<--

CN 1720029	A	20060111	CN 2003-80105291	200312 03

<--

JP 2006511606	T	20060406	JP 2005-502472	200312 03

<--

US 2004180958	A1	20040916	US 2003-732613	200312 10

<--

IN 2005DN02114	A	20070105	IN 2005-DN2114	200505 18

<--

NO 2005003355	A	20050711	NO 2005-3355	200507 11

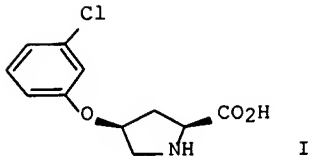
<--

PRIORITY APPLN. INFO.:			US 2002-433491P	P 200212 13

<--

			GB 2003-2657	A 200302 05
			US 2003-454074P	P 200303 12
			WO 2003-IB5729	W 200312 03

OTHER SOURCE(S): MARPAT 141:89004
GI



I

AB Disclosed is the use of an alpha-2-delta ligand, or a pharmaceutically acceptable derivative thereof, for the manufacture of a medicament for the treatment of lower urinary tract symptoms (LUTS), other than urinary incontinence, which are associated with overactive bladder (OAB) and/or benign prostatic hyperplasia (BPH). Such use of approx. 35 specific compds. and/or their derivs. is claimed. For instance, (2S,4R)-4-hydroxypyrrolidine-1,2-dicarboxylic acid 1-tert-Bu 2-Me ester was etherified with 3-chlorophenol under Mitsunobu conditions (86%), followed by saponification of the Me ester with **LiOH** in aqueous THF (98%), and hydrolysis of the tert-Bu ester with HCl in dioxane/THF (86.7%), to give acid I, a use-claimed ligand, as the HCl salt, on a 7-kg scale. In tests of **gabapentin**, a well-known alpha-2-delta ligand, on the micturition reflex of anesthetized rats, a significant, dose-dependent increase in interval between voiding episodes was observed relative to control animals, with a reduction in voids per h from approx. 5 to <1.

IT **60142-95-2, Gabapentin hydrochloride**
60142-96-3, Gabapentin
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(drug use candidate; preparation of alpha-2-delta ligands to treat lower urinary tract symptoms)

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L19 ANSWER 3 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2004:453164 HCAPLUS Full-text
DOCUMENT NUMBER: 140:423950
TITLE: Process for the preparation of (aminomethyl)cycloalkaneacetic acids
INVENTOR(S): Kuppuswamy, Nagarajan; Hariharan, Sivaramakrishnan; Mariadas, Arulselvan
PATENT ASSIGNEE(S): Hikal Ltd., India
SOURCE: PCT Int. Appl., 31 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004046085	A1	20040603	WO 2002-IN224 <--	200211 20

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ,

NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

CA 2506563	A1	20040603	CA 2002-2506563	200211 20 <--
AU 2002356426	A1	20040615	AU 2002-356426	200211 20 <--
EP 1603863	A1	20051214	EP 2002-808152	200211 20 <--

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK

US 2006149099	A1	20060706	US 2003-535253	200602 09 <--
PRIORITY APPLN. INFO.:			WO 2002-IN224 W	200211 20 <--

OTHER SOURCE(S): CASREACT 140:423950; MARPAT 140:423950

AB The invention relates to an improved process for the preparation of (aminomethyl)cycloalkaneacetic acids, in particular **gabapentin** (1-aminomethyl-1-cyclohexaneacetic acid). The claims and examples describe the neutralization of **gabapentin hydrochloride** with an aqueous solution of an **alkali metal base** (40-50 weight %).

IT **60142-96-3P, Gabapentin**
RL: IMF (Industrial manufacture); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(neutralization of **gabapentin hydrochloride**)

IT **60142-95-2, Gabapentin hydrochloride**
RL: RCT (Reactant); RACT (Reactant or reagent)
(neutralization of **gabapentin hydrochloride**)

L19 ANSWER 4 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2004:453163 HCAPLUS Full-text
DOCUMENT NUMBER: 140:423949
TITLE: Improved process for preparation of **gabapentin**
INVENTOR(S): Saigal, Jagdish Chand; Gupta, Rajender Pershad; Naik, Rajesh Vinodrai; Rajshekhar, Araddy; Joshi, Rajesh Dilip
PATENT ASSIGNEE(S): Nicholas Piramal India Limited, India
SOURCE: PCT Int. Appl., 14 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004046084	A1	20040603	WO 2002-IN221	200211 18 <--

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH,

ODP 7

CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

CA 2472815	A1	20040603	CA 2002-2472815	200211 18 <--
AU 2002356424	A1	20040615	AU 2002-356424	200211 18 <--
US 2005119503	A1	20050602	US 2003-497899	200211 18 <--
NZ 533859	A	20061027	NZ 2002-533859	200211 18 <--
EP 1727784	A1	20061206	EP 2002-807696	200211 18 <--
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE, SK, TR				
IN 2004CN00300	A	20051209	IN 2004-CN300	200402 12 <--
PRIORITY APPLN. INFO.:			WO 2002-IN221 W	200211 18 <--

AB A process for producing **gabapentin** [1-(aminomethyl)-1- cyclohexaneacetic acid] from **gabapentin hydrochloride** salt involves conversion to **gabapentin** sulfate which is converted to free base using an inorg. base such as barium hydroxide.

IT **60142-96-3P, Gabapentin**
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)
(production of **gabapentin** from its hydrochloride salt)

IT **60142-95-2, Gabapentin hydrochloride**
RL: RCT (Reactant); RACT (Reactant or reagent)
(production of **gabapentin** from its hydrochloride salt)

IT **1310-58-3, Potassium hydroxide,**
reactions **1310-73-2, Sodium hydroxide,**
reactions
RL: RGT (Reagent); RACT (Reactant or reagent)
(production of **gabapentin** from its hydrochloride salt)

L19 ANSWER 5 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2004:269925 HCAPLUS Full-text
DOCUMENT NUMBER: 140:271196
TITLE: Process for synthesis of 1-(aminomethyl)cyclohexaneacetic acid hydrochloride
INVENTOR(S): Ferrari, Massimo; Ghezzi, Marcello; Belotti, Paolo
PATENT ASSIGNEE(S): Erregierre S.P.A., Italy
SOURCE: U.S. Pat. Appl. Publ., 3 pp.
CODEN: USXXCO

DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004063997	A1	20040401	US 2003-420154	20030422
			<--	
US 6846950	B2	20050125		
CA 2500400	A1	20040415	CA 2003-2500400	20031001
			<--	
WO 2004031126	A2	20040415	WO 2003-EP10866	20031001
			<--	
WO 2004031126	A3	20040527		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
AU 2003273930	A1	20040423	AU 2003-273930	200310 01
			<--	
EP 1558564	A2	20050803	EP 2003-757897	200310 01
			<--	
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK			

PRIORITY APPLN. INFO.:	IT 2002-MI2071	A	200210 01
	<--		
	WO 2003-EP10866	W	200310 01

OTHER SOURCE(S): CASREACT 140:271196

AB A process for the synthesis of 1-(aminomethyl)cyclohexaneacetic acid hydrochloride (**gabapentin hydrochloride**) comprises reaction of 1,1-cyclohexanediacetic acid with Ac2O/NH4OAc and treatment with aqueous **NaOH** and aqueous NaOCl/**NaOH** and acidification with HCl. The process afforded **gabapentin hydrochloride** in 88% yield and HPLC purity >99.5%.

IT **60142-95-2P, Gabapentin hydrochloride**
60142-96-3P, Gabapentin
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)
(process for synthesis of (aminomethyl)cyclohexaneacetic acid hydrochloride)

REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE

IN THE RE FORMAT

L19 ANSWER 6 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2003:113400 HCAPLUS Full-text
DOCUMENT NUMBER: 138:153247
TITLE: Hydrolysis process for the production of 1-(aminomethyl)cyclohexylacetic acid in pure form from 2-azaspiro[4.5]decan-3-one
INVENTOR(S): Peverali, Diego; Fornaroli, Mirco; Velardi, Francesco
PATENT ASSIGNEE(S): Procos S.P.A., Italy
SOURCE: U.S., 5 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6518456	B1	20030211	US 2002-170629 <--	20020614
IT 2001MI2750	A1	20030623	IT 2001-MI2750 <--	20011221
PRIORITY APPLN. INFO.:			IT 2001-MI2750 A <--	20011221

OTHER SOURCE(S): CASREACT 138:153247
AB A process for the production and purification of **gabapentin** [i.e., 1-(aminomethyl)cyclohexylacetic acid] comprises the hydrolysis of 2-azaspiro[4.5]decan-3-one with aqueous HCl, treatment of the resulting product and filtration with acetone, dissoln. in water at an isoelec. pH and crystallization or digestion in the hot in mixts. of diisopropyl ether with ethanol or methanol.
IT **1310-73-2, Sodium hydroxide,** reactions
RL: RGT (Reagent); RACT (Reactant or reagent)
(base; hydrolysis process for the production of 1-(aminomethyl)cyclohexylacetic acid in pure form from 2-azaspiro[4.5]decan-3-one using)
IT **60142-95-2P, Gabapentin hydrochloride**
RL: IMF (Industrial manufacture); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(hydrolysis process for the production of 1-(aminomethyl)cyclohexylacetic acid in pure form from 2-azaspiro[4.5]decan-3-one)
IT **60142-96-3P, Gabapentin**
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(hydrolysis process for the production of 1-(aminomethyl)cyclohexylacetic acid in pure form from 2-azaspiro[4.5]decan-3-one)
REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

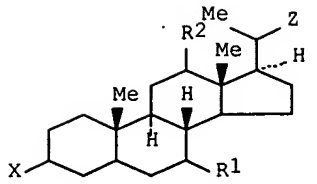
L19 ANSWER 7 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2002:276008 HCAPLUS Full-text
DOCUMENT NUMBER: 136:310071
TITLE: Preparation of bile-acid derived compounds for sustained release of orally delivered drugs
INVENTOR(S): Gallop, Mark A.; Cundy, Kenneth C.; Zhou, Cindy

X.
PATENT ASSIGNEE(S): Xenoport, Inc., USA
SOURCE: PCT Int. Appl., 214 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 9
PATENT INFORMATION:

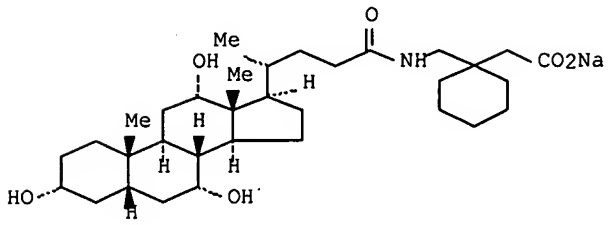
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002028881	A1	20020411	WO 2001-US42513	200110 05
			<--	
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 200211863	A	20020415	AU 2002-11863	200110 05
			<--	
US 2002151529	A1	20021017	US 2001-972425	200110 05
			<--	
US 6992076	B2	20060131		
EP 1343805	A1	20030917	EP 2001-979953	200110 05
			<--	
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
US 2005054559	A1	20050310	US 2004-887505	200407 07
			<--	
US 2005148564	A1	20050707	US 2005-53324	200502 09
			<--	
US 7049305	B2	20060523		
US 2005272710	A1	20051208	US 2005-183911	200507 19
			<--	
US 2005288228	A1	20051229	US 2005-218468	200509 06
			<--	
US 2006166858	A1	20060727	US 2006-388021	200603 24
			<--	
US 2007015716	A1	20070118	US 2006-483770	200607 11
			<--	
PRIORITY APPLN. INFO.:			US 2000-238758P	P

		200010
		06
	<--	
US 2000-249804P	P	
		200011
		17
	<--	
US 2001-297594P	P	
		200106
		11
	<--	
US 2001-297472P	P	
		200106
		11
	<--	
US 2001-297641P	P	
		200106
		11
	<--	
US 2001-297654P	P	
		200106
		11
	<--	
US 2001-972283	A3	
		200110
		05
	<--	
US 2001-972402	A3	
		200110
		05
	<--	
US 2001-972411	A3	
		200110
		05
	<--	
US 2001-972425	A3	
		200110
		05
	<--	
WO 2001-US42513	W	
		200110
		05
	<--	
US 2001-974768	A3	
		200110
		09
	<--	
US 2005-53324	A3	
		200502
		09

OTHER SOURCE(S): MARPAT 136:310071
GI



I



II

AB Bile-acid conjugates such as I [R1, R2 = H, OH; X = OH, DQT; T = O, NH; Q = bond, cleavable linker; D = GABA analog; Z = alkyl substituted with CO2H, SO3H, SO2H, P(O)(OR6)(OH), OSO3H; R6 = (un)substituted alkyl, aryl, MQ'D'; M = CH2OC(O), CH2CH2C(O); Q' = bond, cleavable linker; D' = D], or their pharmaceutically acceptable salts, were prepared for their use as substrates for an intestinal bile acid transporter, and thus I could be utilized to provides sustained systemic concns. of orally delivered drugs to an animal. Thus, prodrug II was prepared via treatment of the acid with **NaOH** obtained by the reaction of cholic acid and 1-aminomethyl-1-cyclohexaneacetic acid hydrochloride. Prodrug II was pharmacol. tested [IC50 = 36 μM vs. IBAT-expressing cells; IC50 = 8 μM vs. LBAT-expressing cells].

IT **60142-96-3P, Gabapentin**
RL: BPN (Biosynthetic preparation); RCT (Reactant); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent)
(preparation of bile-acid derived compds. for providing sustained systemic concns. of drugs after oral administration)

IT **60142-95-2**
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of bile-acid derived compds. for providing sustained systemic concns. of drugs after oral administration)

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L19 ANSWER 8 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1991:450299 HCAPLUS Full-text
DOCUMENT NUMBER: 115:50299
TITLE: Preparation of cyclic amino acid derivatives
INVENTOR(S): Steiner, Klaus; Herrmann, Wolfgang; Crone, Guenter; Combs, Charles Shepherd
PATENT ASSIGNEE(S): Goedecke A.-G., Germany
SOURCE: Eur. Pat. Appl., 9 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 414275	A2	19910227	EP 1990-116293	19900824
			<--	
EP 414275	A3	19910515		
EP 414275	B1	19931208		

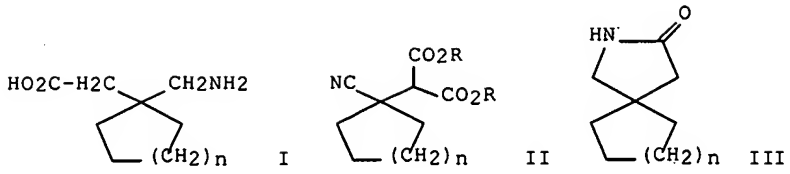
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE

DE 3928184	A1	19910228	DE 1989-3928184 <--	198908 25
US 5068413	A	19911126	US 1990-570493 <--	199008 21
KR 179657	B1	19990515	KR 1990-12974 <--	199008 22
IL 95480	A	19950629	IL 1990-95480 <--	199008 23
HU 54624	A2	19910328	HU 1990-5333 <--	199008 24
HU 208521	B	19931129		
JP 03090054	A	19910416	JP 1990-221423 <--	199008 24
JP 2839344	B2	19981216		
AT 98219	T	19931215	AT 1990-116293 <--	199008 24
ES 2059938	T3	19941116	ES 1990-116293 <--	199008 24
FI 103506	B	19990715	FI 1990-4204 <--	199008 24
FI 103506	B1	19990715		
KR 179946	B1	19990515	KR 1998-32195 <--	199808 07
KR 192007	B1	19990615	KR 1998-32196 <--	199808 07

PRIORITY APPLN. INFO.:		DE 1989-3928184 <--	A 198908 25
		KR 1990-12974 <--	A 199008 22
		EP 1990-116293 <--	A 199008 24

OTHER SOURCE(S): CASREACT 115:50299; MARPAT 115:50299

GI



AB The title compds. [I; n = 1-3 integer] are prepared via alkaline hydrolysis of (cyanocycloalkyl)malonates II [R = alkyl], decarboxylating the resulting II [R = H], catalytically hydrogenating the cyano group, and optionally hydrolyzing the byproducts, lactams III. II [R = Et, n = 2] was hydrolyzed with **NaOH**, the resulting II [R = H, n = 2] in toluene was heated 1 h at 80-85°, and the decarboxylated product hydrogenated over 5% Rh/C to give **gabapentin**.

IT **60142-95-2P 60142-96-3P, Gabapentin**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, from (cyanocyclhexyl)malonate)

L19 ANSWER 9 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1991:229385 HCAPLUS Full-text
DOCUMENT NUMBER: 114:229385
TITLE: Process for the preparation of 1-aminomethyl-1-cyclohexaneacetic acid (**gabapentin**)
INVENTOR(S): Geibel, Wolfram; Hartenstein, Johannes; Herrmann, Wolfgang; Witzke, Joachim
PATENT ASSIGNEE(S): Goedecke A.-G., Germany
SOURCE: Eur. Pat. Appl., 12 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 414274	A2	19910227	EP 1990-116292	199008 24
			<--	
EP 414274	A3	19910515		
EP 414274	B1	19930623		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
DE 3928182	A1	19910228	DE 1989-3928182	198908 25
			<--	
US 5091567	A	19920225	US 1990-570487	199008 21
			<--	
IL 95479	A	19960912	IL 1990-95479	199008 23
			<--	
HU 54623	A2	19910328	HU 1990-5332	199008 24
			<--	
HU 207284	B	19930329		
JP 03118355	A	19910520	JP 1990-221421	199008 24

			<--	
JP 2846084	B2	19990113		
AT 90936	T	19930715	AT 1990-116292	199008 24
			<--	
ES 2058707	T3	19941101	ES 1990-116292	199008 24
			<--	
FI 103040	B	19990415	FI 1990-4203	199008 24
			<--	
FI 103040	B1	19990415		
PRIORITY APPLN. INFO.:			DE 1989-3928182 A	198908 25
			<--	
			EP 1990-116292 A	199008 24
			<--	

OTHER SOURCE(S): CASREACT 114:229385

AB The title compound (I) was prepared by 1) reaction of cyclohexanone, **KOH**, and a phosphonate to give a cyclohexylideneacetate, 2) condensation of the latter with MeNO2 using alkali metal carbonate/Me2SO to give 1-nitromethylcyclohexaneacetate, 3) reduction of the latter to 1-aminomethylcyclohexaneacetate and 2-azaspiro[4,5]decan-3-one at >100°, 4) treatment of the latter with diluted HCl to give I.HCl salt, and 5) treatment of the salt with ion exchange resin. Thus, cyclohexanone and tri-Et phosphonoacetate were added successively to **KOH** in THF at room temperature to give 94.3% Et cyclohexylideneacetate. The latter and MeNO2 were added to K2CO3 in Me2SO at 95° to give 89.4% Et 1-(nitromethyl)cyclohexaneacetate. This was hydrogenated in EtOH over Pd/C at 125° to give 91.6% 2-azaspiro[4.5]decan-3-one which was refluxed with dilute HCl to give 64.7% I.HCl, and converted to I free base via ion exchange.

IT **60142-95-2P, Gabapentin hydrochloride**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and conversion of, to free base)

IT **60142-96-3P, Gabapentin**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, from cyclohexanone and phosphonoacetate)

L19 ANSWER 10 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1977:467910 HCAPLUS Full-text
DOCUMENT NUMBER: 87:67910
TITLE: Cyclic amino acids
INVENTOR(S): Satzinger, Gerhard; Hartenstein, Johannes; Herrmann, Manfred; Heldt, Wolfgang
PATENT ASSIGNEE(S): Goedecke A.-G., Fed. Rep. Ger.
SOURCE: Ger. Offen., 14 pp. Addn. to Ger. Offen. 2,460,891.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2543821	A1	19770414	DE 1975-2543821	197510 01
			<--	
DE 2543821	C2	19841018		
PRIORITY APPLN. INFO.:			DE 1975-2543821 A	197510